

GOVERNMENT OF TELANGANA  
ABSTRACT

Irrigation & CAD Department - Ground Water Department- National Hydrology Project - According Administrative Approval for an amount of Rs. 70.00 Crores for eight years (i.e. 2016-17 to 2023-24) pertaining to Ground Water Component – Orders – Issued.

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**IRRIGATION & CAD (MIG.1) DEPARTMENT**

**G.O.Ms.No. 8**

**Dated: 28-01-2017**  
**Read :**

From the Director, Ground Water Department, Hyderabad,  
Lr.No.5180/NHP/2016, Dated:15.12.2016.

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**ORDER:**

In the circumstances reported by the Director, Ground Water Department, Hyderabad in the reference read above and after careful examination of the matter Government hereby accord administrative approval for an amount of Rs. 70.00 Crores (Rupees Seventy Crores only) under National Hydrology Project for eight years (i.e 2016-17 to 2023-24) pertaining to Ground Water Component, subject to following due procurement procedure, as detailed below and the detailed Project Implementation Plan is annexed to this order:-

A. Water Resources Data Acquisition System	::	Rs. 42.00 Crores
B. Water Resources Information System (WRIS)	::	Rs. 03.50 Cries
C. Water Resourcs Operation and Planning	::	Rs. 10.50 Crores
D. WR Institutions Capacity Enhancement	::	Rs. 14.00 Crores
<b>Total Cost</b>	::	<b>Rs.70.00 Crores.</b>

2. The Director, Ground Water Department shall take necessary action accordingly.

3. This order issues with the concurrence of Finance (EBS-IX) Department, vide their U.O. No. 15786/543/A2/EBS-IX/2016, Dated: 05-01-2017.

**(BY ORDER AND IN THE NAME OF THE GOVERNOR OF TELANGANA)**

**VIKAS RAJ**  
**PRINCIPAL SECRETARY TO GOVERNMENT**

To

The Director, Ground Water Department, Hyderabad.(w.e)

The Engineer-in-Chief (Irrigation), Errumanjil Jalasoudha, Hyderabad

**Copy to:**

The Finance (EBS-IX) Department.

The Director of Works & Accounts, M.J.Market, Hyderabad.

The Accountant General, Telangana State, Hyderabad.

The P.S. to Hon'ble Minister (Irrigation)

The P.S. to Spl. Chief Secretary to Government, I&CAD Deptt.

The P.S. to Principal Secretary to Government, I&CAD Deptt.

SF/SC

//FORWARDED BY ORDER//

SECTION OFFICER

## ANNEXURE

<b>Component</b>	<b>Activity ID</b>	<b>Activity</b>	<b>Items</b>	<b>Details of Items</b>	<b>Category</b>	<b>Quantity</b>	<b>Unit Cost in Lakhs</b>	<b>Total Cost in Lakhs</b>
A. Water Resources Data Acquisition System	A1.2.01	Real Time Ground Water Measurement	Procurement of DWLRs with Telemetry Type	Real Time Data Acquisition System (RTDAS) for Groundwater Monitoring in the state, PDS and DSS area.	Goods	900	1.25	1125
	A1.2.02	Real Time Ground Water Measurement	Construction of PZs with Protection works to improve GW Monitoring Network in the state	Construction of piezometers with protection works for additional GW monitoring required @ 3 per each groundwater basin and piezometer construction in PDS and DSS area	Civil Works	800	1	800
	A1.2.03	Real Time Ground Water Measurement	Protection works for Peizometers drilled under HP-II	Protection works to the existing piezometers	Civil Works	300	0.4	120
	A1.5.01	Water Quality Labs	Creation of WQ level II laboratory at Siddipet, Medak District	Construction of Level II Lab to distribute work uniformly to reduce the lag time for analysis after collecting the sample in the field and creation of DDC	Civil Works	1	100	100
	A1.5.02	Water Quality Labs	AMCs for existing labs and Water Quality equipment at Siddipet	AMC support for existing and new lab	Goods	5	1	5

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A. Water Resources Data Acquisition System	A1.5.03	Water Quality Labs	Consumables for Level II + lab and equipment at Siddipet	Consumables for WQ labs	Goods	5	3	15
	A1.6.01	Water Quality Lab Equipment	Portable Units for Water Quality Tests	For obtaining field level Water Quality parameters	Goods	3	8	24
	A1.6.03	Water Quality Lab Equipment	Lab Equipment for level II lab at Siddipet, Medak	Procurement of lab equipment for proposed new lab	Goods	1	50	50
	A1.6.02	Water Quality Lab Equipment	Updation of existing Water Quality Labs at Hyderabad & Karimnagar	Updation of existing WQ equipment	Goods	2	40	80
	A1.7.02	Manual Observation Equipment	Rejuvanation of Existing piezometer for effective water level measurement in Piezometers constructed	Flushing of existing piezometers for effective Water Level measurement	Civil Works	1500	0.1	150
	A1.7.01	Manual Observation Equipment	Borehole Logging Equipment with AMC support	Procurement of bore hole logger to delineate different lithological units, Aquifer zones	Goods	1	50	50
	A1.7.04	Manual Observation Equipment	Scientific & IT Equipments for Purpose Driven Studies	Procurement of scientific equipment for PDS and DSS	Goods	5	10	50
	A1.7.03	Manual Observation Equipment	Basic Field equipment for field officers for Strengthening Manual Observations	Procurement of field equipment for field investigations, surveying, data collections etc.	Goods	62	2.75	170.5
	A1.8.01	Field Surveys	Civil works for Purpose Driven Studies	Civil works in Purpose Driven Studies and DSS area	Civil Works	5	5	25
	A1.9.01	O&M of Hydromet System	O&M for Piezometers	For Maintenance of piezometer sites	Goods	1	42	42
	A1.9.03	O&M of Hydromet System	AMC for existing lab equipment at Hyderabad and Karimnagar	AMC support for existing water quality equipment	Goods	8	2	16
	A1.9.04	O&M of Hydromet System	Consumables for lab equipment at Hyderabad and Karimnagar	For consumables in existing water quality labs	Goods	8	2.72	21.76

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A. Water Resources Data Acquisition System	A1.9.04	O&M of Hydromet System	O&M contingencies	For office and maintenance activities etc.	O&M	1	55	55
	A1.9.05	O&M of Hydromet System	Office maintenance of State and District Data Centres including Hiring of vehicles	Maintenance of State and District Data Centres and hiring of 18 vehicles for data acquisition and field investigations	O&M	4.5	75	337.5
	A3.1.01	Construction of Data Centres	Establishment of Regional Ground Water Information Centre in Karimnagar	Construction of Regional Data Centre at Karimnagar including Infrastructure	Civil Works	1	90	90
	A3.1.02	Construction of Data Centres	Renovation / Construction of District Data, Training cum Informatic Centre (Nizamabad & Nirmal) including Infrastructure	Construction of District Data cum Informatic Centre including infrastructure in two locations	Civil Works	2	50	100
	A3.2.01	Rennovation of Data Centres	Comprehensive Planing for interiors and Architecture for DDCs, SDC and Training cum Information Centres	Charges for comprehensive planning for interiors and architecture for DDCs, SDC and training cum information centres	Consultancy	1	20.5	20.5
	A3.2.02	Rennovation of Data Centres	Upgradation of State Data Centre Centre at HO & Exhibition Centre	Upgradation of SDC & creation of training cum informatic centre at Head Office	Civil Works	1	100	100
	A3.4.01	IT Equipment for Data Centres	Data Retrival System (DRS)	Procurement of Data Retrieval Systems	Goods	70	0.75	52.5
	A3.4.02	IT Equipment for Data Centres	Data Analysis System (DAS)	Procurement of Data Analysis Systems	Goods	38	1.25	47.5
	A3.4.03	IT Equipment for Data Centres	Internet Connectivity for 31 DDCs	Internet Connectivity for DDCs	Goods	217	0.25	54.25
	A3.4.04	IT Equipment for Data Centres	Networking for DDCs	Networking for DDCs	Goods	31	0.3	9.3
	A3.4.05	IT Equipment for Data Centres	Internet Connectivity for SDC	Internet Connectivity for SDC	Goods	8	2.5	20
	A3.4.06	IT Equipment for Data Centres	Networking for SDC	Networking for SDC	Goods	2	1	2

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A. Water Resources Data Acquisition System	A3.4.07	IT Equipment for Data Centres	Procurement of android based instruments for Site Management and Data Updation (Mobile applications) to each office	Procurement of Tabs	Goods	15	0.2	3
	A3.4.08	IT Equipment for Data Centres	Audio visual equipment for Distance learning	Procurement of audio visual equipment	Goods	15	1.5	22.5
	A3.4.09	IT Equipment for Data Centres	Data backup (HDD) for DDCs	Data backup system for DDCs	Goods	62	0.05	3.1
	A3.4.10	IT Equipment for Data Centres	Data Backup (HDD) for SDC	Data backup system for SDC	Goods	8	0.05	0.4
	A3.4.11	IT Equipment for Data Centres	Workstations for SDC	Purchase of Workstations for SDC	Goods	15	1.5	22.5
	A3.4.12	IT Equipment for Data Centres	ACs 2T for DDCs (31+3 labs)	Purchase of ACs for DDCs	Goods	34	0.8	27.2
	A3.4.13	IT Equipment for Data Centres	ACs 2T for SDC	Purchase of ACs for SDC	Goods	10	0.8	8
	A3.4.14	IT Equipment for Data Centres	A0 Plotter cum Scanner	Purchase of plotter cum scanner	Goods	1	10	10
	A3.4.15	IT Equipment for Data Centres	UPS for DDCs	Purchase of UPS for DDCs	Goods	31	1	31
	A3.4.16	IT Equipment for Data Centres	Desktops for DDCs & 3 Labs	Procurement of desktops for DDCs and Labs	Goods	68	0.75	51
	A3.4.17	IT Equipment for Data Centres	Laptops	Procurement of laptops	Goods	10	0.75	7.5
	A3.4.18	IT Equipment for Data Centres	Printers B/W MFP for DDCs	Purchase of B/W printers for DDCs	Goods	50	0.25	12.5
	A3.4.19	IT Equipment for Data Centres	Printers (color) for DDCs	Purchase of colour printers for DDCs	Goods	12	0.5	6
	A3.4.20	IT Equipment for Data Centres	MFPs with AMC for 6 years for SDC	Purchase of MFPs with AMC for SDC	Goods	1	2.5	2.5
	A3.4.21	IT Equipment for Data Centres	Printers B&W MFP for SDC & senior officers	Purchase of printers B&W MFP for SDC	Goods	10	0.25	2.5
	A3.4.22	IT Equipment for Data Centres	Printers Color for SDC	Purchase of color printers for SDC	Goods	3	0.5	1.5

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A. Water Resources Data Acquisition System	A3.4.23	IT Equipment for Data Centres	Video Conferencing facility for SDC & DDCs	Video Conferencing support to SDC & DDCs	Goods	1	50	50
	A3.5.01	Software for Data Centers	GW Application Software	Purchase of Groundwater application software	Goods	1	20	20
	A3.5.02	Software for Data Centers	ArcGIS Std + Spatial +3D	Purchase of GIS software	Goods	31	6	186
<b>Component 'A' Sub Total</b>								<b>4200.01</b>
B. Water Resources Information System (WRIS)	B2.1.01	Strengthening Regional / State WRIS	WQ standards & Accredration	To set monitoring and analysis standards	Consultancy	1	10	10.00
	B2.1.02	Strengthening Regional / State WRIS	Strengthening of state WRIS & integration with India WRIS	Creation of Water Resources Information System and integrate with India Water Resource Information System	Consultancy	1	30	30.00
	B2.2.01	Development / Procurement of Spatial Databases	Georeferencing of GW Monitoring network	Georeferencing of GW Monitoring network	Consultancy	3000	0.01	30.00
	B2.2.02	Development / Procurement of Spatial Databases	Upgradation of Data Entry & Analysis Software	Upgradation of Data Entry & Analysis Software	Consultancy	1	20	20.00
	B2.2.03	Development / Procurement of Spatial Databases	Development of software for Village wise Groundwater estimation and maintenance	Development of software for Village wise Groundwater estimation and maintenance	Consultancy	1	50	50.00
	B2.2.04	Development / Procurement of Spatial Databases	Procurement of SOI Toposheets (Hard copy & digital data)	Procurement of digital toposheets	Goods	200	0.2	40.00
	B2.3.01	Data Digitization	Creation and automation of Central Database and Uploading of Historical Data with MIS facility for real timedata Dissemination including web publishing software.	Computerisation of department Historical Groundwater data and creation of Central database including Hardware & Software	Consultancy	1	100	100.00

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B. Water Resources Information System (WRIS)	B2.4.01	Website Development and Hosting	To Develop & maintenance of the TSGWD website	Development & maintenance of the TSGWD website	Consultancy	1	30	30.00
	B2.6.01	Development of Information Brochures	Development of information brochures	Pamphlets, posters and brouchers for information dissemination	Civil Works	1	20	20.00
	B2.7.01	Development of Mobile Apps	Data Communication & Mobile Application Design	Development of Mobile Apps for information and data dissemination	Consultancy	1	20	20.00
<b>Component 'B' Sub Total</b>								<b>350.00</b>
C. Water Resources Operation and Planning	C1.1.0 1	River basin management platform	Expansion of DSS(P) in Entire SRSP Command for optimization of the Water Systems	To develop Macro level comprehensive DSS tool to manage the Water resources combined with Surface Water	Consultancy	1	75	75.00
	C2.1.0 1	PDS for Water Quality	Assessment of impact of urbanization on Groundwater Quality and Management of Groundwater in Greater Hyderabad Municipal Corporation Area	Proposed with National Geophysical Institute (NGRI)	Consultancy	1	100	100.00
	C2.1.0 2	PDS for Water Quality	Study on impact of artificial recharge on groundwater regime	Proposed with JNTU, Hyderabad	Consultancy	1	50	50.00
	C2.2.0 1	PDS for Ground Water	Comprehensive Assessment of Groundwater Resources for management in upcoming smart city, warangal town	Proposed with NIH, Kakinada	Consultancy	1	75	75.00
	C2.2.0 2	PDS for Ground Water	Impact of sand mining on Groundwater in parts of Manjira River Basin	Proposed with NIH, Belgaum	Consultancy	1	20	20.00

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C. Water Resources Operation and Planning	C2.2.03	PDS for Ground Water	Groundwater Model development in micro basin of Hard rock in Krishna and Godavari River Basins of Telangana	State specific micro basin studies as a part of river basin planning by CWC.	Consultancy	1	100	100.00
	C2.2.04	PDS for Ground Water	Resource material for PDS & DSS	To create resource material	Goods	1	50	50.00
	C2.2.05	PDS for Ground Water	Study to delineate basin wise subsurface geometry in 3D using existing data and evaluation of aquifer characteristics in Telangana region to develop comprehensive ground water Atlas	To develop groundwater resource management system in 3Dimension, evaluation of aquifer characteristics by conducting pumping tests in Telangana region for effective GW resource assessment. Development GW Atlas	Consultancy	1	480	480.00
	C2.4.01	PDS for SW GW interaction	Tanks as source for regional Groundwater Recharge, using Managed Aquifer Storage & Recovery (ASR)	Proposed with IIT, Hyderabad	Consultancy	1	75	75.00
	C3.1.01	Pilot Activities	Policy support	To develop a policy support with ASCI, Hyderabad	Consultancy	2	12.5	25.00
<b>Component 'C' Sub Total</b>								<b>1050.00</b>
D. Institutions Capacity Enhancement	D2.1.01	Trainings	Inhouse trainings	As per training calender	O&M	1	25	25
	D2.1.02	Trainings	Trainings - National and International	Trainings as per MoWR, NIH and as per training calender	O&M	1	150	150
	D2.2.01	Workshops	Groundwater Awareness Raising Activity & Dissemination of Data	Awareness raising workshops	O&M	94	0.35	32.90
	D2.3.01	Study Tours	Study Tours - National and International	Study Tours - National and International	O&M	1	25	25
	D3.2.01	Operational Cost of PMU	Recurring expenses for PMU including TA, DA, stationery and other office expenses etc.	Nececiated for Institutional support	O&M	1	180	180

<b>Component</b>	<b>Activity ID</b>	<b>Activity</b>	<b>Items</b>	<b>Details of Items</b>	<b>Category</b>	<b>Quantity</b>	<b>Unit Cost in Lakhs</b>	<b>Total Cost in Lakhs</b>
D. Institutions Capacity Enhancement	D3.2.02	Operational Cost of PMU	To create resource material (Annual Reports, pamphlets, Brochure, posters, audio visuals, documentaries etc.,)on water conservation & management awareness creation to water users (Information Education & Communication)	Creation of resource material (Annual Reports, pamphlets, Brochure, posters, audio visuals, documentaries etc.,) on water conservation & management awareness creation to water users (Information Education & Communication)	Goods	1	30	30
	D3.2.03	Operational Cost of PMU	Hiring of vehicles for investigations and HIS data collection.	Hiring of 15 vehicles for SPMU, investigations and HIS data collection.	O&M	4.5	54	250
	D3.2.04	Operational Cost of PMU	Establishing and Operational Cost of PMU	Establishing and Operational Cost etc.	O&M	1	125	125
	D4.1.01	Incremental Staff Cost	Outsourcing/Contract Lab staff remuneration	Staff costs towards existing outsourcing lab staff (25 nos)	O&M	5	40	200
	D4.1.02	Incremental Staff Cost	Outsourcing/Contract staff remuneration	Staff costs towards outsourcing staff for HIS (32 DEOs + 2 DPOs+2 IT, DB & Network expert)	O&M	4.5	69	300
	D4.1.03	Incremental Staff Cost	Hiring technical and financial experts	Financial support for hiring technical and financial experts	O&M	1	82	82
<b>Component 'D' Sub Total</b>								<b>1399.9</b>
<b>Grand Total</b>								<b>6999.91</b>
<b>Project Cost</b>								<b>7000.00</b>

**VIKAS RAJ**  
**PRINCIPAL SECRETARY TO GOVERNMENT**